UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

[redacted]
[redacted]

[redacted]

[redacted]

To: Administrator, Defense Minerals Exploration Administration
Attention: [redacted]

From: Field Team, Region IV

Subject: Final Report, DMPA Docket 1530, [redacted], The Eustace and C. W. Thrubee, Bessie Nos. 1 to 6, Copper-Lead Claims, Walker Mining District, Yavapai County, Arizona

Enclosed are the original and three copies of the final report on DMPA-1530, the original and one copy of DMA Form 3b and a copy of the letter of denial to the applicant.

J. H. East, Jr.

A. H. Koschmann

cc: WRSterns w/copy of final report
CAAnderson " " " "
AHKoschmann " " " "
Min. Div. " " " "
DMA Final Report

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

March 25, 1952

Memorandum

To: Field Team, Region IV, DMEA

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, DMPA Docket 1530, Ike Kusisto and C. W. Strubee, Bannie Claims (Copper-Lead) Walker Mining District, Yavapai County, Arizona

Enclosed are nine copies of the engineering report by T. M. Romslo of the Bureau of Mines. C. S. Bromfield of the Geological Survey helped with the field examination and concurs with our conclusions and recommendations, but will not submit a separate report on geology.

The mine workings are inaccessible. The outcropping veins are weak and essentially barren. The mine has produced little or no ore and the dump containing rock from development headings in the reputed deposit appear to be barren. In general, mines in this area were worked for near-surface gold ores and have yielded little or no base metal.

We concur in the recommendation of the examining engineers that both the request for a development loan of $10,000 and the alternate oral request for exploration assistance in the amount of $6,231.75 be denied.

W. H. King

W. H. King

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Date Rec'd.
MAR 21 1952
BUREAU OF MINES
Denver, Colorado

Arizona-New Mexico Branch
Southwest Experiment Station
Box 4097
University Station

Tucson, Arizona

MINING DIVISION
REGION IV

March 20, 1952

Memorandum

To : W. H. King, Acting Chief, Mining Div., Region IV

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : Final Report, DMA Docket 1530, Ike Kusisto and C. W. Strubee, Bannie Nos. 1 to 6 Copper-Lead Claims, Walker Mining District, Yavapai County, Ariz.

Enclosed are original and 8 copies of the above report by T. M. Romslo of the Bureau of Mines. Although C. S. Bromfield of the Geological Survey helped with the field examination and concurs with the conclusions and recommendations of this report, he will not submit a separate report on geology.

Because all mine workings are inaccessible and there is no evidence which tends to show that this mine contains enough ore to repay a production loan (other than a report made in 1928 which claims that the mine contains 27,000 tons of ore), the examining engineer recommends that the loan be denied.

This report has my approval.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC W. H. King (8)
C. A. Anderson
DMA-1530
DF

FOR VICTORY
BUY UNITED STATES SAVINGS BONDS AND STAMPS

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

# DMA-1530, Ike Kusisto and C. W. Strubee

# Bannie Nos. 1 to 6 Copper-Lead Claims

# Walker Mining District, Yavapai County, Ariz.

T. M. Romslo, Mining Engineer
U. S. Bureau of Mines

March 1952

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By T. M. Romslo[1/]

The Bannie copper-lead property, Yavapai County, Ariz. was examined in connection with a request for Governmental aid under the Defense Production Act by Ike M. Rusisto and C. W. Strubee, both of Prescott, Ariz. The application was for a mine development loan of $10,000, for the purpose of reopening workings reputed to contain reserves of 27,000 tons of copper-lead ore, and for driving 157 feet from the face of an adit to an ore body. An alternate application for an exploratory loan of $6,231.75 to reopen and sample the main workings was submitted verbally by Rusisto during the field investigation.

The Bannie property was explored for gold ores, probably about 1910. All of the present development work was completed before 1926. A report of an examination of the property in 1928 by L. C. Blakemore, mining geologist, was made available to the mining engineer. This report indicates that production was confined to 65 tons of copper ore that was on the mine dump in 1928. This ore, of unknown grade, has since been removed from the property.

The dominant rocks on the claims, much of which are covered with alluvium, are gabbro and granite. Basalt and schist also are present. The basalt occurs as narrow dikes in the granite. The latter is in contact with gabbro at the main workings. A small exposure of schist occurs at the south end of the property.

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1/ Mining Engineer, U. S. Bureau of Mines

Quartz veins are exposed in a 25-foot wide shear zone at adit No. 1. The shear zone, which is at a gabbro-granite contact, dips almost vertically and strikes N. 20° W. It is composed of schistose rock, and 2 vertical quartz veins. The veins, one 6 inches wide and the other about 2 feet in width, carry no noticeable ore minerals. Another quartz vein, 2 to 2.5 feet wide, occurs in schist at an inaccessible shaft south of adit No. 1.

The inaccessible main workings are said to consist of a 356-foot vertical shaft from which approximately 1,500 feet of drifting has been done on 3 levels. Another prominent mine working is adit No. 1, also inaccessible. Blakemore describes the ore deposits as being 11.5 feet wide by 210 feet long on the 325-foot level, and 5 to 7 feet wide by 110 feet long on the 165-foot level. He gives the assays for 12 samples that contain 0.8 to 28.8 percent copper, gold that ranges from $0.80 to $100.88 a ton, and silver that ranges from 1.0 ounce to 28.8 ounces. These assays give no clue as to the grade of the reputed reserves of 27,000 tons of ore that Blakemore estimates for the mine, as they are identified only as having come "from different parts of the mine and property".

A few fragments of quartz carrying small amounts of galena and chalcopyrite were present as dump material at 2 places on the property. It is probable that these specimens came from the quartz veins, and that the ore occurrence is similar to that at many other mines in the Bradshaw Mountains.

In general, this type of mine was worked for near-surface gold ores prior to 1950. Ore mineralization below the oxidized zone normally occurred as small, widely-scattered zones in the quartz veins. Significant tonnages of base-metal ores were produced from a few mines where the ore cropped out in strong and persistent shear zones. None of the mines are presently active.

It is the opinion of the examining engineer that the Bannie mine contains little or no developed ore, and that the possibilities of developing a significant tonnage of base-metal ore are unfavorable. This opinion is supported by the following evidence, much of which is circumstantial: (1) The outcropping veins are weak and essentially barren of ore mineralization; (2) the mine has produced little or no ore and the main dumps, containing rock from development headings in the reputed deposit, appear to be barren; and (3) the ore occurrence at the Bannie is similar to that of many mines in the Bradshaw Mountains that have yielded little or no base-metal ores.

The examining engineer recommends that both the original and alternate request for Governmental aid at the Bannie mine be denied.

The examining engineer was accompanied by D. S. Bromfield of the Geological Survey on this examination. Bromfield concurs with these findings but will not write a separate report.

# DMA-1530 IKE KUSISTO AND C. W. STRUBEE
# BANNIE NOS. 1 TO 6 COPPER-LEAD CLAIMS
# WALKER MINING DISTRICT, YAVAPAI COUNTY, ARIZ.

Engineering Report

By T. M. Romslo
Mining Engineer
U. S. Bureau of Mines

March 1952

DMA-1530, IKE KUSISTO AND C. W. STRUBEE
DANNIE NOS. 1 to 6 COPPER-LEAD CLAIMS
WALKER MINING DISTRICT, YAVAPAI COUNTY, ARIZ.

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## INTRODUCTION

The Bannie Copper-lead mine, Yavapai County, Ariz., was examined in connection with an application for Governmental aid by Ike M. Kusisto and C. W. Strubee, both of Prescott, Ariz. The applicants requested a mine development loan of $10,000 for 2 purposes; first, to make accessible a reported 27,000 tons of copper-lead ore by dewatering the mine and retimbering the upper 50 or 60 feet of the shaft; and second, to cut an ore body by driving 157 feet from the face of an existing adit. They proposed to repay the loan, with interest, from ore production at the rate of 10 percent of the smelter returns.

During the field investigations, Kusisto presented verbally an alternate application for Governmental aid. That application requested an exploratory loan of $6,231.75 for the purpose of rehabilitating the upper 50 or 60 feet of the main shaft and for dewatering and sampling the mine. The drifting for 157 feet, of the original application, was eliminated because information indicated the target of this work had been intersected by existing mine workings.

This report contains information obtained during the course of the investigation that was carried out under docket DMA-1530. It also presents conclusions and recommendations regarding the merits of the proposed projects.

The examination was made February 28, 1952 by C. S. Bromfield, Geological Survey, and T. M. Romslo, Bureau of Mines. Bromfield concurs with the conclusions and recommendations of this report although he will not write a separate report. Kusisto, one of the applicants, accompanied the engineers during the field investigations.

## LOCATION AND ACCESSIBILITY

The Bannie property is 13.6 miles east of Prescott, Ariz., county seat of Yavapai County, and a station on the Santa Fe Railroad branch line between Ash Fork and Phoenix. (Fig. 1) The property is accessible from Prescott by traveling 2.5 miles north on U. S. highway 89, thence 3.0 miles easterly on state highway 69, thence 5.7 miles southerly on the "Walker" road. At that point, signed "Bannie Mine", the road forking to the right is followed 2.4 miles to the mine. The latter road is unimproved, steep in places, and at present cannot readily be traversed by passenger automobiles. The U. S. Highway is paved and the state highway and the "Walker" road are of graded dirt construction with no excessive grades.

## PHYSICAL FEATURES AND CLIMATE

The property is in the Bradshaw Mountains at an average altitude of about 6,300 feet. The topography is rough.

Vegetation consists of a fairly heavy growth of ponderosa pine, and some oak and manzanita. Some of the pine is suitable for mine timber.

Spring Creek, near which the main workings are located, drains westerly to Lynx Canyon. There are no permanent streams in the area. The main workings are said to make sufficient water for a small mine and mill operation.

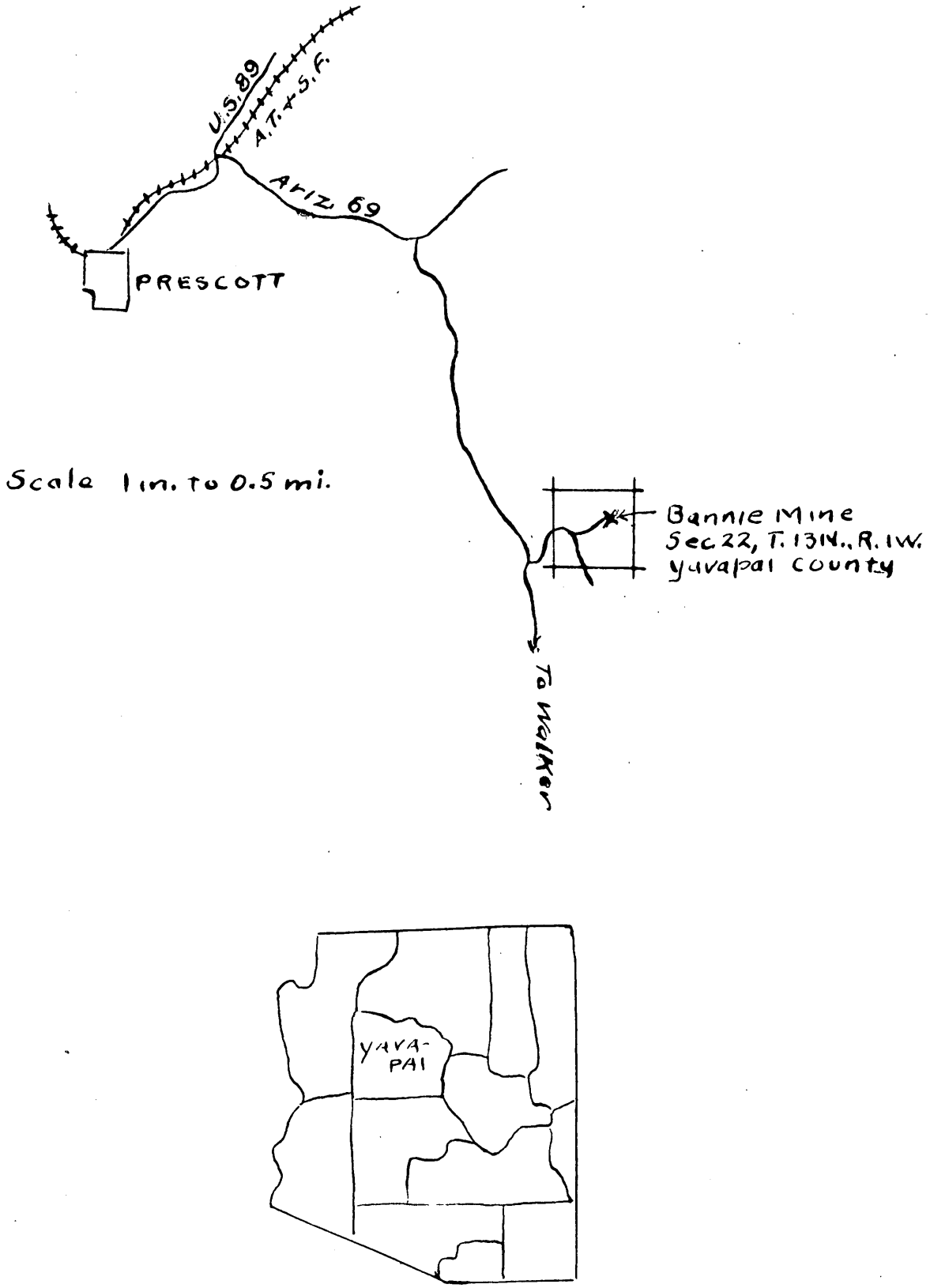



Fig. 1, Location Map. Bannie Copper-lead property, DMA 1530

At Prescott the annual mean temperature is about 53 degrees. The annual temperature ranges from 21 to 110 degrees. Precipitation at Prescott averages about 18.8 inches annually. This includes about 30 inches of snowfall.

## HISTORY AND PRODUCTION

Little is known about the history of the Bannie property. The quartz veins were explored for gold about 1910 and all of the present development probably had been completed before 1926. The mine was examined in 1928 by L. G. Blakemore, a mining geologist. A copy of Blakemore's report on the Bannie mine was made available to the examining engineer by the applicants. In recent years the present owners have done only the necessary assessment work.

There are no available production records. Blakemore said that about 65 tons of copper ore from the 165-foot level was on the dump in 1928. He did not report the grade of this ore. Ike Kusisto, one of the owners, stated that the above ore was recovered from the property some years ago.

The property is inactive at present.

## PROPERTY AND OWNERSHIP

The property consists of a group of 6 unpatented mining claims in sec. 22, T. 13 N., R. 1 W., Walker mining district, Yavapai County, Ariz. It is owned by Ike W. Kusisto, P. O. Box 938, Prescott, Ariz. and C. W. Strubee, 204 N. Montezuma Street, Prescott, Ariz.

A claim map of the property was not available during the investigations.

## GEOLOGY

### General

The dominant rocks exposed on the property are gabbro, granite, and a fine-grained dark colored rock, basaltic in appearance. Schist also is exposed in a small area. Rock exposures are extensive only along Spring Creek, which drains westerly through the property and separates the main shaft from adit No. 1.

Outcrops south of Spring Creek are confined to several small exposures of gabbro and to a small area of schist at the shaft, about 700 feet south of adit No. 1. A casual inspection of the area north of Spring Creek indicates that much of the area is underlain by gabbro.

### Description of the Deposit

The main shaft probably was sunk in a shear zone that is exposed by an open cut at the portal of adit No. 1. The shear zone, about 25 feet wide, is at a granite-gabbro contact. It strikes about N. 20° W. and has an almost vertical dip. It contains 2 quartz veins in a schistose rock that is iron-stained near the gabbro. One of the veins is about 2 feet wide and occurs at the contact with granite. The other vein, about 6 inches wide, occurs within 3 feet of the gabbro. The attitude of the veins and the schistosity conform with the strike of the shear zone.

Another quartz vein can be seen below the collar of an inaccessible shaft, south of the main workings. It occurs in a schistose rock and has an estimated width of 2 to 2.5 feet. The vein appears to dip almost vertically and its strike is about N. 40° W.

A small amount of galena and chrysocolla was observed in fragments of quartz present in piles of about 100 pounds at adit No. 1, and the shaft south of the main workings. No ore minerals were observed in the quartz veins. The veins were not sampled by the Government engineer because previous examinations by Kusisto had indicated that they carried no ore mineralization.

Blakemore described the deposit as being 11.5 feet wide and 210 feet long on the 325-foot level, and 5 to 7 feet wide by 100 feet long on the 165-foot level. He estimated the ore reserves at 27,000 tons but did not give the grade of ore. The report included the assays of 12 samples containing 0.8 to 28.8 percent copper, $0.80 to $100.87 of gold a ton, and 1.0 to 28.8 ounces of silver a ton. No data on the widths of the samples were presented and the locations of the samples were described only as having "come from different parts of the mine and property".

## ORE RESERVES

The ore occurrence at the Dannie property probably is similar to that at many other mines in the Bradshaw Mountains. In general this type of mine was worked for near-surface gold and silver ores prior to 1930. One mineralization below the oxidized zone normally

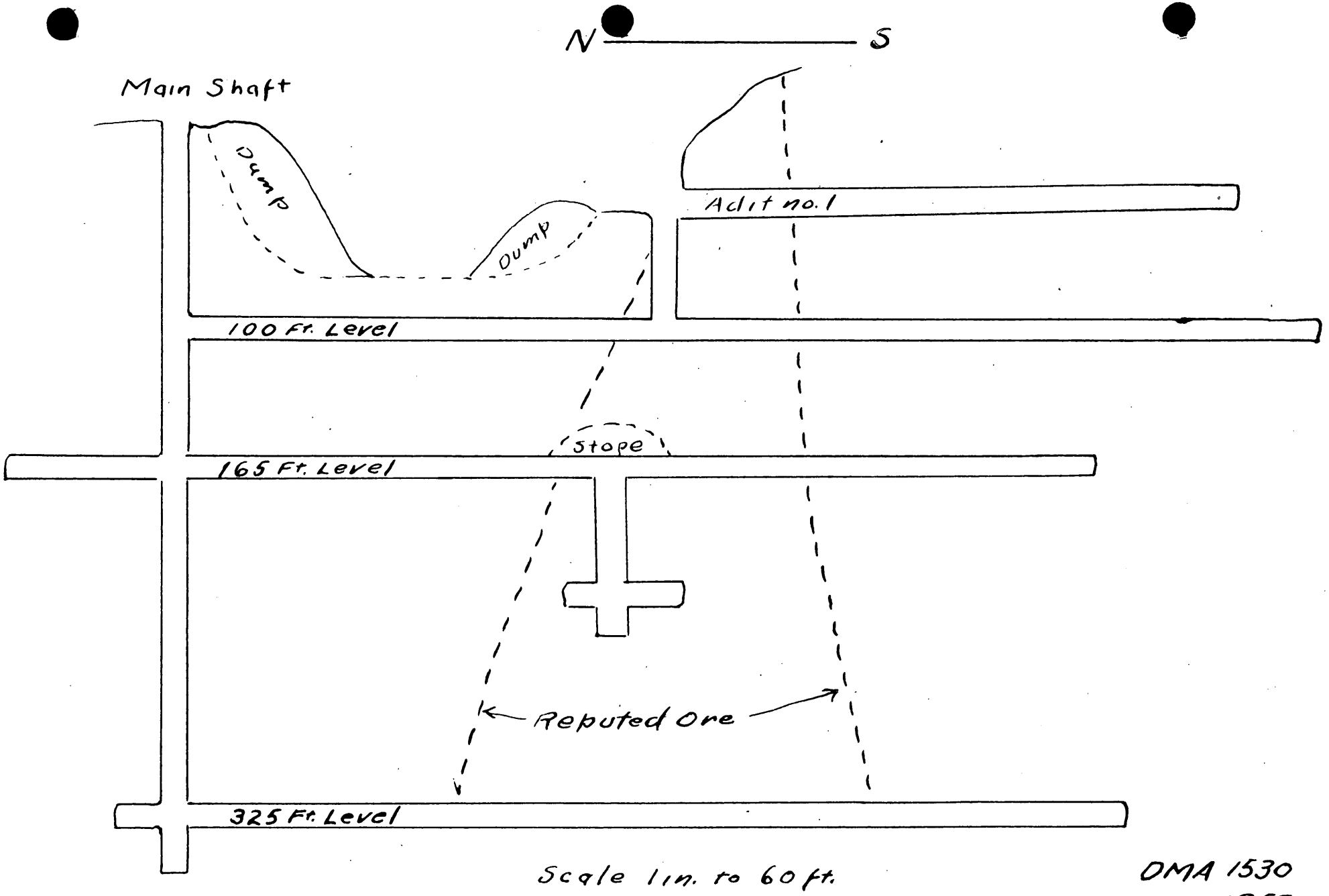
occurred in small, widely-scattered zones in the quartz veins. Production of a significant tonnage of base-metal ores was confined to a few mines where the ore cropped out in strong and persistent shear zones. None of the mines are presently active.

At the Bannie property, no ore-in-place is exposed, little or no ore has been produced, and the quartz fragments on the main dumps appear to be barren of ore mineralization. This evidence, when correlated with information on similar deposits, indicates that little or no economic ore has been developed at the Bannie mine. The following statement by Blakemore also indicates the reputed reserves of 27,000 tons are not composed of economic ore. He said: "It is my conviction, that the quartz fissures are of secondary consideration, as regards the development of the mine and the development in the future should be directed northeast as well as southwest, crosscutting the country, looking toward the discovery of lenses of pyrite and chalcopyrite in the schist on the contact with the intrusives".

## PRESENT STATUS

There are no buildings nor equipment on the property.

The principal workings are shown on figure 2. They are inacessible. Blakemore's description of the workings shows that figure 2 is correct except for adit No. 1. He states that adit No. 1 is "really two tunnels, paralleling one another and connected by a short 20 ft. drift. Tunnel No. 1 is 527 feet long. Tunnel No. 2 is 168 feet long".




OMA 1530
Mar. 1952

Fig. 2 Main Workings of Bannie Mine, Yavapai County, Ariz.

Other important workings on the property consist of adit No. 2 and 2 shafts. Adit No. 2, driven from a point 327 feet east of the main shaft, extends 400 feet to the south. The 2 shafts, about 25 feet apart, are located about 700 feet south of the main shaft. One of these shafts is open but inaccessible at present. The size of the dump indicates this shaft is less than 100 feet deep. The other shaft is caved about 10 feet below the surface. Presumably this is the caved shaft of Blakemore's report. He said reliable reports gave the shaft a depth of 145 feet.

Minor workings, mainly to the north of the main shaft, consist of small pits, a caved shallow shaft, and an inaccessible adit believed to be a few tens of feet in length.

## CONCLUSIONS

It is the opinion of the examining engineer that little or no economic ore has been developed and that the possibility of developing significant reserves of base-metal ores are unfavorable.

## RECOMMENDATIONS

It is recommended that both the request for a development loan of $10,000 and the alternate request for an exploration loan of $6,231.75, be denied.